

## ABSTRACT

An FIR filter is provided comprising a coefficient generator to generate first and second coefficients, a first control conductor, and a second control conductor. A controller is coupled to a first end of the first control conductor and a first end of the second control conductor. A shared wiring is provided having its first end being coupled to the coefficient generator. A first memory is coupled to a second end of the shared wiring and coupled to a second end of the first control conductor to store the first coefficient in response to the controller. A first multiplier is responsive to the first coefficient stored in the first memory and the input, and a first delay circuit is responsive to an input.

A second memory is coupled to the second end of the shared wiring and coupled to a second end of the second control conductor to store the second coefficient in response to the controller, and a second multiplier is responsive to the second coefficient stored in the second memory and the first delay element.

0976190-050202